

US EPA RECORDS CENTER REGION 5



466410

Monthly Oversight Report 62
44728 AES [46526 RAC]
ACS NPL Site
Griffith, Indiana
February 4, 2006 – March 3, 2006



BLACK & VEATCH

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Black & Veatch Special Projects Corp.

USEPA/AES
American Chemical Service, Inc. RAO (0057-ROBE-05J7)

BVSPC Project 44728
BVSPC File C.3
March 14, 2006

Mr. Kevin Adler
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report
No. 62 for February 2006

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 62 for February 2006 for the American Chemical Service, Inc. Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbellm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.
Site Manager

Enclosure

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Monthly Oversight Summary Report No. 62
ACS Superfund Site
TO 057, 44728.238 (AES) [WA57, 46526.238 (RAC)]

Reporting Period: Month of February (February 4 – March 3, 2006)

BVSPC O/S Dates: February 17, 2006 (Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	2	Respondent's General Contractor
U.S. Environmental Protection Agency	1	Federal Regulatory Agency
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	1	General Contractor
Microbac	1	GWTP Sampling Contractor

Construction Activities

Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- Montgomery Watson Harza pumped product from well DPE-53.
- Microbac collected samples from the groundwater treatment plant for routine process monitoring.
- Montgomery Watson Harza held an operation and maintenance meeting on February 9.

Activities Performed:

Montgomery Watson Harza (MWH) reported (March 6) that the groundwater treatment plant (GWTP) was operational 99% of the time (666 of 672 hours) in February (January 27–February 24), processing 656,180 gallons of groundwater at average rates of 25 to 40 gpm. MWH reported that groundwater was pumped to the plant from all trench and well sources. Microbac collected samples from the GWTP for routine process monitoring.

MWH continued to operate the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems and the OFCA and SBPA air sparge systems, processing vapors through thermal oxidizer units 1 and 2 (thermox 1 and 2).

MWH reported that thermox 1 operated for 100% of the time (672 of the 672 hours) in February, processing 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from the same 30 (of the total 46) ISVE wells that have been used during previous reporting periods.

MWH reported that thermox 2 operated for 100% of the time (672 of the 672 hours) in February, processing 2,000 cfm of vapors collected from all 42 OFCA ISVE wells and aeration tank T102.

MWH reported that it pumped 25 gallons of free product from ISVE well SVE-53 in the SBPA on February 27. MWH reported that it planned to continue pumping from SVE-53 for 5 to 6 continuous hours during each of the next 2 weeks and then move the pump to wells SVE-72 and SVE-65 to continue testing the product recovery from these wells. Product was collected in a drum at the surface and transported to the GWTP and transferred to oil holding tank T-6.

Because well DPE-61 consistently produced more than 20 gallons of product each week during December, MWH reported that it had installed a dedicated pneumatic pump in well DPE-61 on February 24. Effluent from this dual-phase pump is processed the same as the effluent from other dual-phase pumps and is conveyed to and treated at the GWTP.

However, because of the previously documented low production of only 1 to 2 gallons of product per well per week, MWH discontinued monthly pumping from four other ISVE wells that contained product. Product levels in these wells will be monitored and product will be removed as necessary.

MWH reported that in February, air was being injected through Group 1 of five wells (SVE-50, -54, -73, -79, and -81), each flowing at about 20 cfm. MWH reported that air will be injected using this Group 1 set of wells through February, after which air will be injected using a second (and subsequently, a third) group of five wells.

MWH reported that blower ME-102 (that provides air to the activated sludge tank and is enclosed in a noise-suppression housing) had failed last year and that it had ordered a new blower and motor. Delivery and installation are expected in March. In the meantime, air is being supplied to the activated sludge tank using blower ME-103, but the noise-suppression housing has not been relocated to cover ME-103.

MWH reported that it had informed Mr. Howard Anderson (local resident who had filed a noise complaint) that ME-103 was running without the noise-suppression housing.

MWH reported that ACS had not reported a recurrence of odors in its break room on the SBPA.

MWH reported that it plans to replace the main 30 HP piston air compressor at the GWTP with a 40 HP rotary screw air compressor.

MWH reported that it plans to replace the existing two 20,000 pound granular activated carbon (GAC) tanks with new smaller tanks holding only 6,000 pounds each of GAC. MWH reported that less carbon is now needed to treat the contaminated groundwater since construction and operation of the biotank.

MWH reported that replacement of the air compressor and GAC tanks will require close coordination inasmuch as the existing GAC tanks must be removed in order to remove and replace the air compressor.

MWH conducted an operations and maintenance (O&M) meeting at its Chicago office on February 9. BVSPC attended this meeting.

Because of the lack of field activity, weekly reports are not attached. Weekly reports will be prepared in the future if there are sufficient field activities to warrant such reporting. However, correspondence and log book notes of the daily activities are attached. BVSPC conducted oversight of the field activities on February 17.

Topics of Concern: None

Concern Resolution: None

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to continue operating Group 1 air injection wells in the SBPA.
- MWH to monitor odors in the ACS break room.
- MWH to continue pumping product from selected ONCA SBPA dual phase extraction wells.
- MWH will conduct semiannual groundwater monitoring well sampling in March.
- MWH, ISOTEC, and PSA Environmental will conduct 4th full scale in-situ chemical oxidation (ISCO) injections in April.
- MWH will continue weekly construction coordination meetings at the site when field activities warrant such meetings.
- MWH will continue monthly O&M meetings to report on operation of active treatment systems.

Signature: Larry Campbell

Date: March 14, 2006

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**SITE STATUS MEETING MINUTES
FOR FEBRUARY 9, 2006 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

**FEB 14 2006
L.M. CAMPBELL**

MEETING DATE: Thursday, February 9, 2006

MEETING TIME: 10:00 a.m.

MEETING LOCATION: MWH Chicago Office

ATTENDEES: Kevin Adler – U.S. EPA (via phone)
Larry Campbell – Black & Veatch
Amy Clore – MWH
Chris Daly – MWH
Justin Finger - MWH
Lee Orosz – MWH (via phone)
David Powers - MWH
Peter Vagt – MWH

TOPICS:

SITE STATUS

General Site Health and Safety

There have been no health and safety incidents since the last meeting held on January 13th. Work was performed on Thermal Oxidizer 1 (ThermOx 1) to repair several pinhole leaks that had been detected in the quench section of the scrubber. Since some of the holes were located on the upper portion of the quench header, an OSHA-approved scaffold was built to give workers access. United/Anco Services, Inc. of Griffith, Indiana constructed the scaffold on January 12th and disassembled it on January 13th. As a precaution, Thermal Oxidizer 2 (ThermOx 2) was also shut down while the repairs were being made.

On January 20th, an ACS employee reported that a cap had been dislodged from one of the SBPA ISVE wells. Upon inspection, the cap was cracked and belonged to an ISVE vacuum well. The cap was immediately replaced. ✓

Tailgate safety meetings have been performed daily during the past month, prior to beginning activities associated with the treatment plant maintenance and ThermOx 1 repairs.

Groundwater Treatment Plant (GWTP) Status

The GWTP ran 96 percent throughout the month of January (645 out of 672 hours). Blower ME-103 is still operating in place of blower ME-102 which malfunctioned in November 2005. A new blower has been ordered and has a scheduled delivery date of

March 1, 2006. The noise abatement housing that was installed around ME-102 was not moved to ME-103.

The evening of January 25th, while pumping water from the containment area around the Bio-tank, the sand filter malfunctioned causing water flow to back up and the plant to shut down. The GWTP was down for 12 hours while the problem was remedied.

MWH is in the process of evaluating air compressors to replace the main air compressor at the GWTP. The existing air compressor is aging and has required increased maintenance. The new compressor will be 40 horsepower (hp) instead of the current 30-hp compressor, and is anticipated to be installed in March 2006.

MWH is evaluating alternatives to the existing carbon vessels. Small holes have developed in the existing units. The proposed carbon vessels will hold only 6,000 pounds of carbon instead of 20,000 pounds that the current vessels hold. Much less carbon is currently needed due to the addition of the bio-treatment phase in the GWTP. Because the new units are much smaller, they will eliminate the health and safety concerns (elevated work, confined space entry, pressurizing tanks, etc.) associated with the change-out process.

Off-Site Area/SBPA ISVE Systems

The SBPA ISVE system was operational 57 percent of the time during January (381 out of 672 hours), and the Off-Site ISVE system was operational 92 percent of the time during January (620 out of 672 hours).

Maintenance activities were performed on both thermal oxidizer systems. ThermOx 1 was shut down on January 9th for repair of pinhole leaks on the scrubber's quench section. It was turned back on January 18th. ThermOx 2 was also shut down for safety precautions on January 12th and 13th while repairs were being made to the scrubber for ThermOx 1.

MWH is working with an alloy supplier to evaluate the effects of the ISVE vapor streams on various Hastelloy alloys. A rack of six alloys has been inserted into the piping of ThermOx 1. After a period of three months, the rack will be removed and the extent of corrosion of each alloy will be evaluated.

Five air injection wells are currently running at the ACS facility (SVE-50, SVE-54, SVE-73, SVE-79, and SVE-81). MWH was on site on January 9th to bring SVE-79 online as the fifth air injection well. MWH plans to rotate the air injection between three groups of five wells on a monthly basis. In general, when a well is not operating as an air injection well, it will be switched to operate as a vapor extraction well. MWH has prepared a summary of the SBPA ISVE System Upgrades Startup that will be submitted to the Agencies in February 2006.

Free Product Removal

Free product removal activities were conducted for five consecutive weeks, beginning the week of December 5th in six wells (SVE-52, SVE-53, SVE-62, SVE-72, SVE-88, and DPE-61). During this time, DPE-61 has consistently produced high recovery rates of a water and product mixture. Due to these high recovery rates and the low viscosity of the liquid, a pneumatic pump (typical of the dual-phase extraction wells) will be permanently installed in the well. This pump, which is linked to the extraction system, will automatically begin pumping as the well recharges with the water and product mixture. A temporary air-driven pump will be inserted into wells SVE-53 and SVE-72 beginning the week of February 20th for two weeks each to evaluate the recovery rates of these wells. The pump will run for five or six continuous hours once a week for two weeks. Based on the recovery rates, MWH will then evaluate the cost-effectiveness of installing dedicated pumps in these wells. After wells SVE-53 and SVE-72 have been evaluated, the air-driven pump will be added to well SVE-65 around the week of March 20th. The pump will remain in this well indefinitely and will run five or six continuous hours each week. Liquid levels at SVE-52, SVE-62, and SVE-88 will continue to be measured; however, at this time, product removal at these locations will be performed only as needed.

Interaction with ACS Facility and Community

MWH has contacted ACS facility personnel to explain the changes that have been made to the SBPA ISVE System. Since the system now incorporates injection of air into several wells originally installed as vapor extraction wells (in addition to the air sparge points), the facility personnel should be aware of the modifications to the system. Since the SBPA ISVE System Upgrades have been started in November, ACS personnel have not reported any leaks around the facility or any odors in the break room.

The ACS facility plans to hire four or five new employees as the result of receiving a new two-year work contract. The work involves making polymers for styrofoam. The operation will be conducted on the northeast portion of the ACS property. No additional chemicals are expected to be on site as a result of the new operation.

Due to the malfunction of Blower ME-102 at the GWTP, a replacement blower has been ordered and is anticipated to be delivered in March 2006. Blower ME-103 will be operated in the interim. Unlike Blower ME-102, Blower ME-103 is not housed in a blower shed. Peter Vagt of MWH has called and left a message for Howard Anderson (local resident who previously had commented on excessive noise at the GWTP). Peter Vagt called Mr. Anderson again on February 14th and informed him of the blower breakdown and the plan to install a new blower inside the sound baffling before spring.

LOOK AHEAD

Field Events

- Next Round of Product Removal – February 13th
- SBPA ISVE System Monitoring – February 21st

Reports

- Groundwater Monitoring Summary Report – submitted January 31, 2006
- Monthly Status Report – February 10, 2006
- Lower Aquifer Investigation Report – March 2006
- Chemical Oxidation Summary Report – February 2006
- Quarterly Report, 3rd Quarter 2005 – February 2006
- Summary of SBPA ISVE System Upgrades Startup – January 2006

Health & Safety Look Ahead

- In late March, MWH will be hosting the Griffith Fire Department for their annual facility inspection and orientation.
- Proper precautions should be taken to avoid slips, trips, and falls associated with the winter weather.
- Appropriate PPE should be worn and appropriate procedures should be followed while performing product removal activities.

Future Meetings

- Monthly Site Status Meeting – Friday, March 10, 2006, 10 a.m. at MWH Chicago office.

JEF/CAD/PJV

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Remedial Progress Report	February-06	Report Date: 3/6/2006																																										
GWTP & Dewatering																																												
<p>The GWTP was operational for 666 hours out of 672 from Jan 27 to Feb 24. Total Gallons treated = 656,180 gallons since 1/27/06 (28 days)</p>		<p><u>Tables, Graphs & Figures</u> Table - Effluent Summary Graphs - Off-Site Dewatering Graphs - SBPA Dewatering</p>																																										
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Table
Summary of Effluent Analytical Results
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 103 12/14/2005	Month 104 1/11/2006	Month 105 2/7/2006	Effluent Limits	Lab Reporting Limits
pH	8.00	7.48 /J	7.5 /J	6-9	none
TSS	NS	0.3 B	NS	30	10
BOD	NS		NS	30	2
Arsenic	NS	4.7 B	NS	50	3.4
Beryllium	NS	0.30 B/B	NS	NE	0.2
Cadmium	NS	ND	NS	4.1	0.3
Manganese	NS	1.4 B/B	NS	NE	10
Mercury	NS	ND	NS	0.02 (w/DL = 0.64)	0.64
Selenium	NS	ND	NS	8.2	4.3
Thallium	NS	ND	NS	NE	5.7
Zinc	NS	ND	NS	411	1.2
Benzene	0.50 U	0.10 J/	0.50 U	5	0.5
Acetone	2.5 U	2.5 U/UJ	2.2 JB	6,800	3
2-Butanone	2.5 U	2.5 U/UJ	2.5 U/UJ	210	3
Chloromethane	0.50 U	0.50 U/	0.50 U	NE	0.5
1,4-Dichlorobenzene	0.50 U	0.50 U/	0.50 U	NE	0.5
1,1-Dichloroethane	0.50 U	0.50 U/	0.50 U	NE	0.5
cis-1,2-Dichloroethene	0.50 U	0.69 /	0.43 J	70	0.5
Ethylbenzene	0.50 U	0.50 U/	0.50 U	34	0.5
Methylene chloride	0.67	1.0	1.8	5	0.6
Tetrachloroethene	0.50 U	0.20 J/	0.50 U	5	0.5
Trichloroethene	0.50 U	0.50 U/	0.50 U	5	0.5
Vinyl chloride	0.50 U	0.50 U/	0.50 U	2	0.5
4-Methyl-2-pentanone	2.5 U	2.5 U/	2.5 U	15	3
bis (2-Chloroethyl) ether	NS	ND	NS	9.6	9.6
bis(2-Ethylhexyl) - phthalate	NS	ND	NS	6	6
4 - Methylphenol	NS	ND	NS	34	10
Isophorone	NS	ND	NS	50	10
Pentachlorophenol	NS	ND	NS	1	1
PCB/Aroclor-1016	NS	ND	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	NS	ND	NS	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	NS	ND	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	NS	ND	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	NS	ND	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	NS	ND	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	NS	ND	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Bolded result indicates a exceedence of the discharge limit
pH data is expressed in S.U.

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NS = This analyte was not sampled or analyzed for

NE = No effluent limit established.

DL = Detection limit

* = Approved SW-846 method is incapable of achieving effluent limit.

DRAFT VERSION

For Informational Purposes Only

Not all data presented here has been validated
Notes and suffix definitions have not been updated.

Suffix Definitions:

/ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

J = Result is estimated

B = Compound is also detected in the blank

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

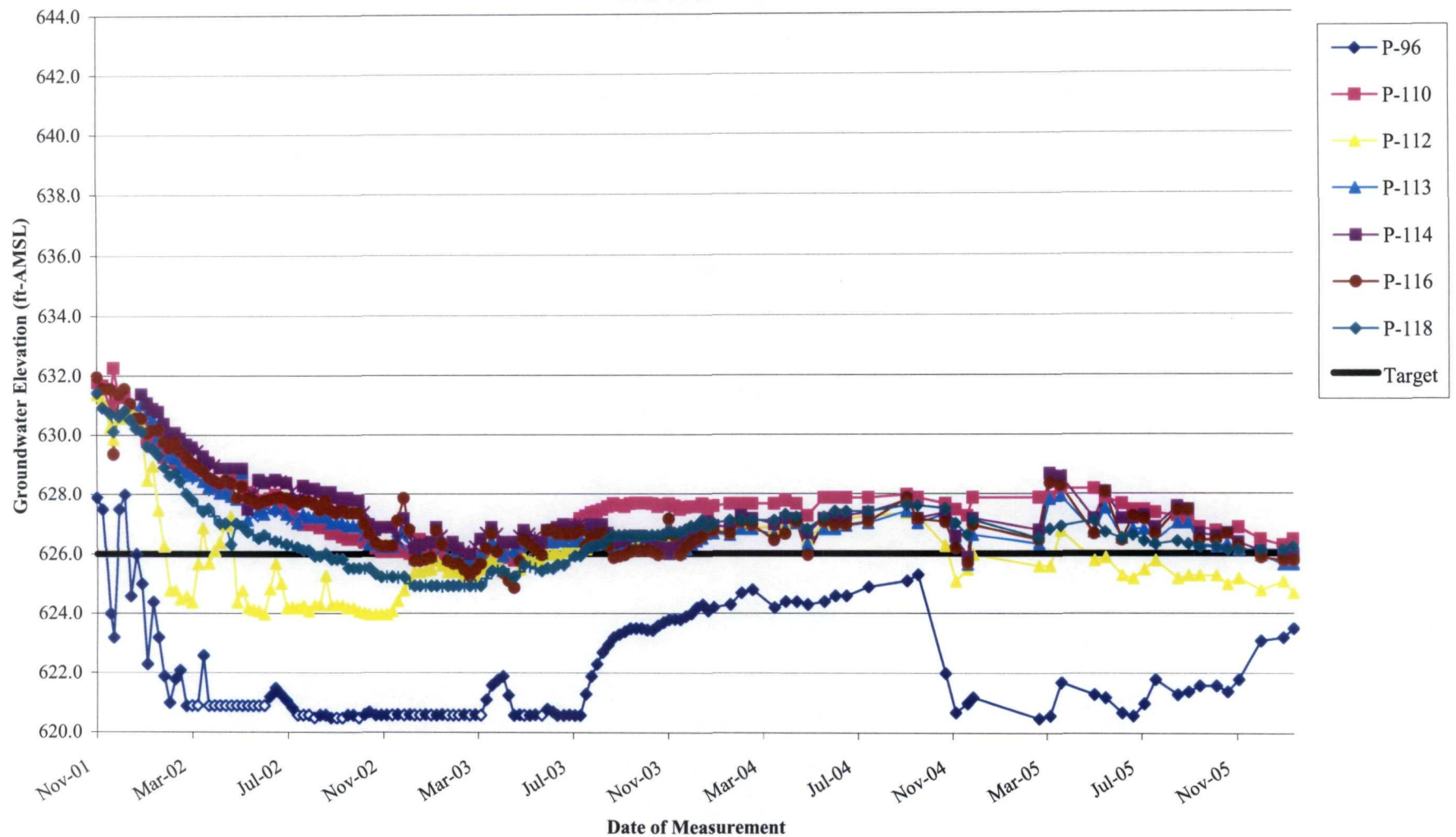
JB = Result is detected below the reporting limit and is an estimated concentration.

The compound is also detected in the method blank resulting in a potential high bias

UB = Compound or analyte is not detected at or above the indicated concentration due to blank contamination

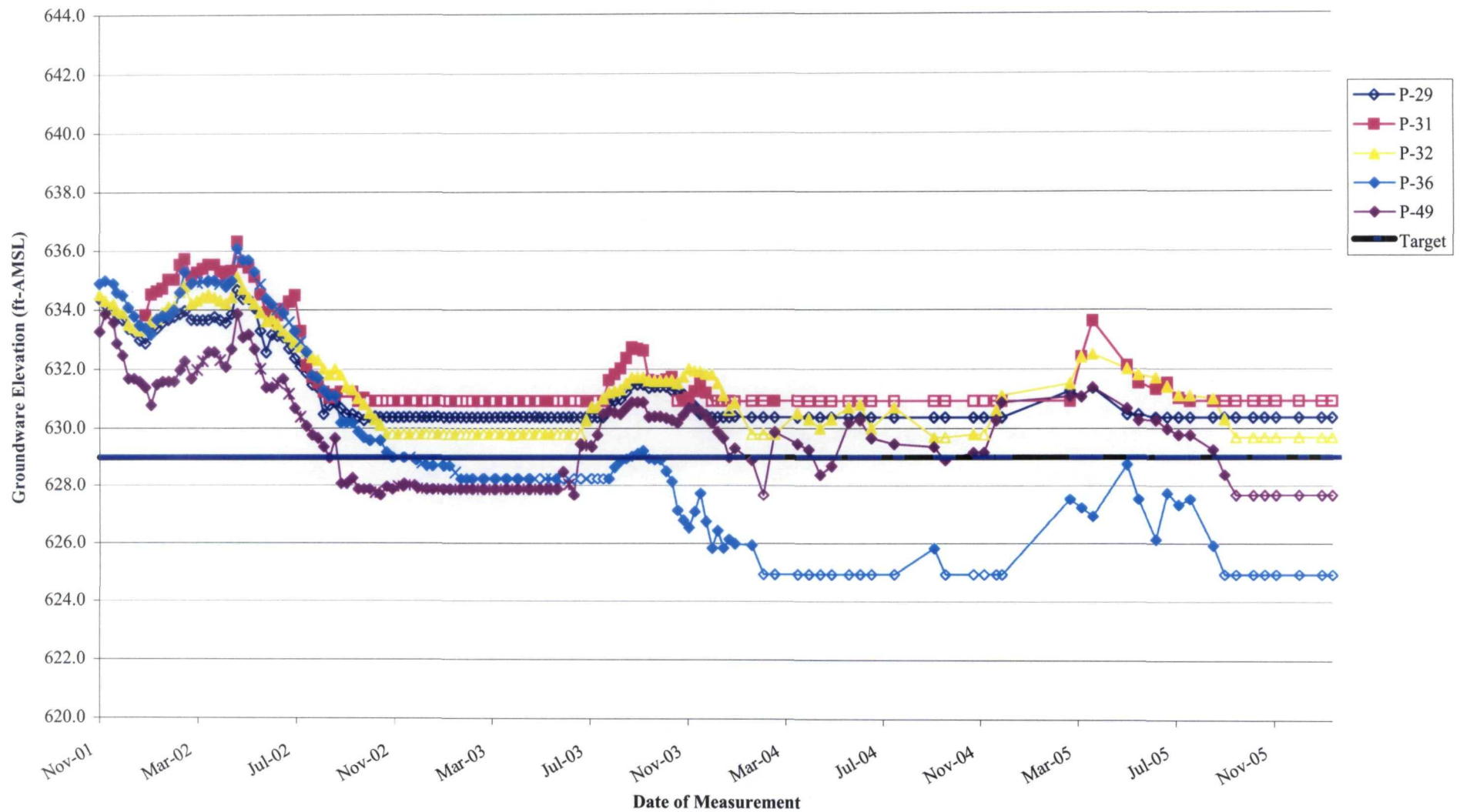
UBJ = Analyte is not detected at or above the indicated concentration due to blank contamination, however the calibration was out of range. Therefore the concentration is estimated.

Figure 3
Off-Site Water Level Status - Piezometers
Groundwater Monitoring
ACS NPL Site
Griffith, Indiana



Note:
Hollow points represent dry piezometers
(data used for graphing purposes only). The bottom elevation of the piezometers may vary due to silting

Figure 1
SBPA Water Level Status
ACS NPL Site
Griffith, Indiana



Note:

Hollow points represent dry piezometers (data used for graphing purposes only).

The bottom elevation of the piezometers may vary due to silting of the well or removal of silt.

ALC/jmf/CAD

J:/209/0603/0301/BWES Data/BWES Performance.2006.xls/On-S

Table 3
SBPA and Off-Site ISVE System Results
for Method TO-14 (VOCs) - January 2006
American Chemical Service
Griffith, Indiana

Compounds	Units	Sampled 1/9/2006			
		SBPA ISVE		Off-Site ISVE	
1,1,1-Trichloroethane	ppbv	24,000		18,000	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	ND	U	ND	U
1,1-Dichloroethane	ppbv	2,900		2,100	
1,1-Dichloroethene	ppbv	840		620	
1,2-Dichloroethane	ppbv	250	J	600	
1,2-Dichloropropane	ppbv	360		160	J
2-Butanone (Methyl Ethyl Ketone)	ppbv	ND	U	6,700	
2-Hexanone	ppbv	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	ND	U	3,800	
Acetone	ppbv	940	J	7,400	
Benzene	ppbv	7,200		13,000	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	ND	U	ND	U
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	ND	U	ND	U
Chloroethane	ppbv	410		ND	U
Chloroform	ppbv	6,200		1,400	
Chloromethane	ppbv	ND	U	ND	U
cis-1,2-Dichloroethene	ppbv	22,000		2,600	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	10,000		12,000	
m,p-Xylene	ppbv	66,000		54,000	
Methylene Chloride	ppbv	5,800		20,000	
o-Xylene	ppbv	34,000		20,000	
Styrene	ppbv	ND	U	ND	U
Tetrachloroethene	ppbv	41,000		18,000	
Toluene	ppbv	66,000		76,000	
trans-1,2-Dichloroethene	ppbv	160	J	ND	U
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	23,000		12,000	
Vinyl Chloride	ppbv	1,200		120	J
Total	ppbv	312,260		268,500	
Total	lb/hr	8.343		7.989	

Notes:

NC - Not calculated

ND - Non-detect

ppbv - parts per billion volume

lb/hr - pounds per hour

1/9/06 VOCs in lb/hr calculated based on Offsite: 1812 scfm, 60 degrees Fahrenheit (1/9/06)

On-site: 1551 scfm, 80 degrees Fahrenheit (1/9/06)

Qualifiers:

J - Result is estimated

U - below reported quantitation limit

_ / - Laboratory data qualifier

/ _ - Data validation qualifier

Table 6
SBPA and Off-Site ISVE System Results
for Method TO-13 (SVOCs) - January 2006
American Chemical Service
Griffith, Indiana

Compounds	Units	Sampled 1/9/2006			
		SBPA ISVE	Off-Site ISVE		
1,2,4-Trichlorobenzene	µg	0.67	J	1.4	
1,2-Dichlorobenzene	µg	65		40	
1,3-Dichlorobenzene	µg	5.4		1.4	
1,4-Dichlorobenzene	µg	14		4.6	
2,4,5-Trichlorophenol	µg	ND	U	ND	U
2,4,6-Trichlorophenol	µg	ND	U	ND	U
2,4-Dichlorophenol	µg	ND	U	ND	U
2,4-Dimethylphenol	µg	ND	U	ND	U
2,4-Dinitrophenol	µg	ND	U	ND	U
2,4-Dinitrotoluene	µg	ND	U	ND	U
2,6-Dinitrotoluene	µg	ND	U	ND	U
2-Chloronaphthalene	µg	ND	U	ND	U
2-Chlorophenol	µg	ND	U	ND	U
2-Methylnaphthalene	µg	23		10	
2-Methylphenol (o-Cresol)	µg	ND	U	ND	U
2-Nitroaniline	µg	ND	U	ND	U
2-Nitrophenol	µg	ND	U	ND	U
3,3'-Dichlorobenzidine	µg	ND	U	ND	U
3-Nitroaniline	µg	ND	U	ND	U
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U
4-Bromophenyl-phenyl Ether	µg	ND	U	ND	U
4-Chloro-3-methylphenol	µg	ND	U	ND	U
4-Chloroaniline	µg	ND	U	ND	U
4-Chlorophenyl-phenyl Ether	µg	ND	U	ND	U
4-Methylphenol/3-Methylphenol	µg	ND	U	ND	U
4-Nitroaniline	µg	ND	U	ND	U
4-Nitrophenol	µg	ND	U	ND	U
Acenaphthene	µg	ND	U	ND	U
Acenaphthylene	µg	ND	U	ND	U
Anthracene	µg	ND	U	ND	U
Benzo(a)anthracene	µg	ND	U	ND	U
Benzo(a)pyrene	µg	ND	U	ND	U
Benzo(b)fluoranthene	µg	ND	U	ND	U
Benzo(g,h,i)perylene	µg	ND	U	ND	U
Benzo(k)fluoranthene	µg	ND	U	ND	U
bis(2-Chloroethoxy) Methane	µg	ND	U	ND	U
bis(2-Chloroethyl) Ether	µg	ND	U	ND	U
bis(2-Ethylhexyl)phthalate	µg	3.2	J	2.8	J
Butylbenzylphthalate	µg	32		ND	U
Chrysene	µg	ND	U	ND	U
Dibenz(a,h)anthracene	µg	ND	U	ND	U
Dibenzofuran	µg	ND	U	ND	U
Diethylphthalate	µg	1.4	J	1.6	J
Dimethylphthalate	µg	ND	U	ND	U
di-n-Butylphthalate	µg	ND	U	ND	U
Di-n-Octylphthalate	µg	4	J	ND	U
Fluoranthene	µg	ND	U	ND	U
Fluorene	µg	ND	U	ND	U
Hexachlorobenzene	µg	ND	U	ND	U
Hexachlorobutadiene	µg	11		4.1	
Hexachlorocyclopentadiene	µg	ND	U	1.4	J
Hexachloroethane	µg	ND	U	ND	U
Indeno(1,2,3-c,d)pyrene	µg	ND	U	ND	U
Isophorone	µg	4.2		26	
Naphthalene	µg	37		47	
Nitrobenzene	µg	ND	U	ND	U
N-Nitroso-di-n-propylamine	µg	ND	U	ND	U
N-Nitrosodiphenylamine	µg	ND	U	ND	U
Pentachlorophenol	µg	ND	U	ND	U
Phenanthrene	µg	ND	U	ND	U
Phenol	µg	ND	U	ND	U
Pyrene	µg	ND	U	ND	U
Total	µg	200.87		140.30	

Notes:

µg - Microgram
 NC - Not calculated
 ND - Non-detect

Qualifiers:

J - Result is estimated
 U - below reported quantitation limit
 / - Laboratory data qualifier
 /_ - Data validation qualifier

Campbell, Larry M.

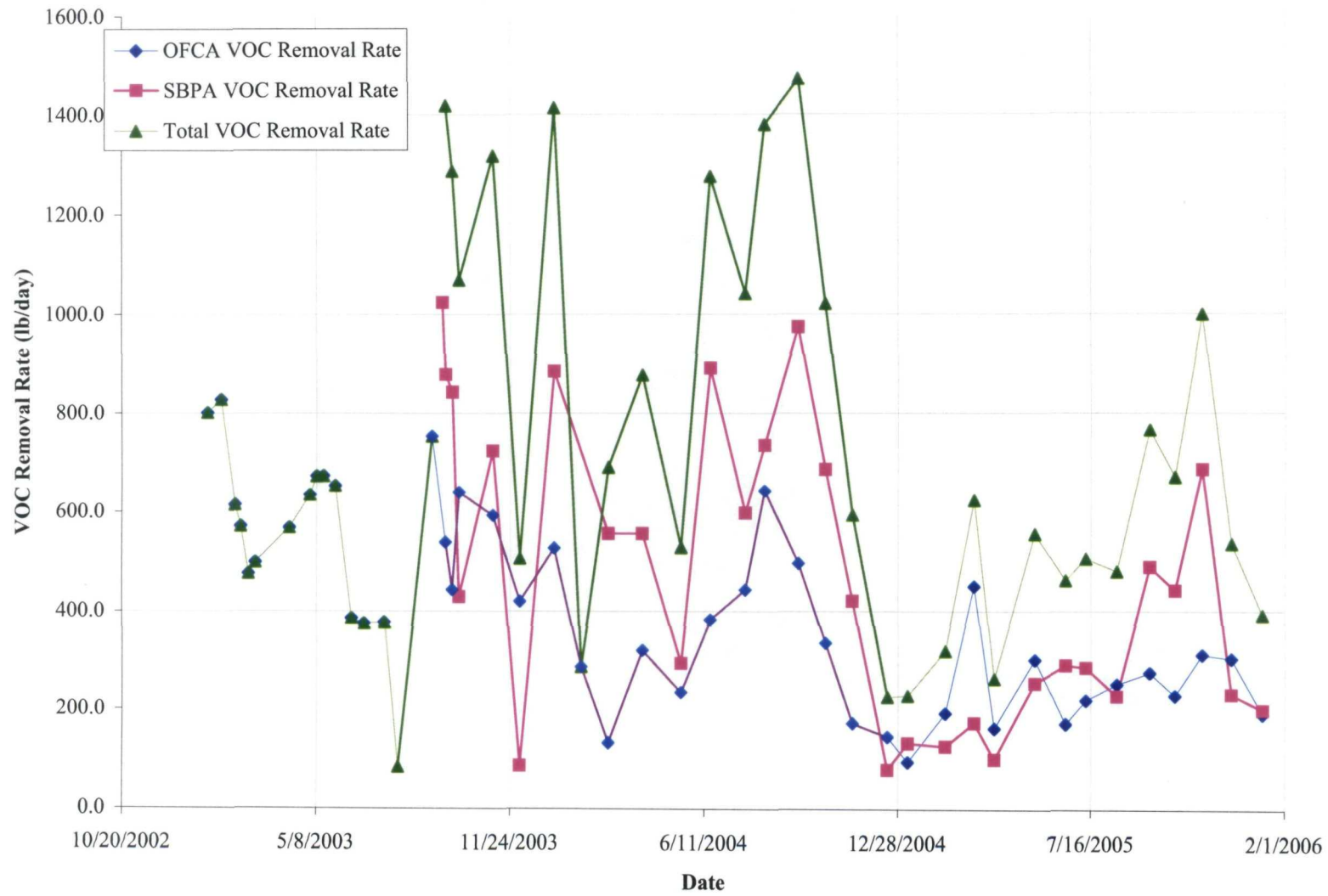
From: Christopher A Daly [Christopher.A.Daly@us.mwhglobal.com]
Sent: Monday, March 06, 2006 9:09 PM
To: Campbell, Larry M.
Subject: ACS Metrics
Attachments: ACS Remedial System Metrics - Feb06_A.pdf

Thought you might like an advance copy....

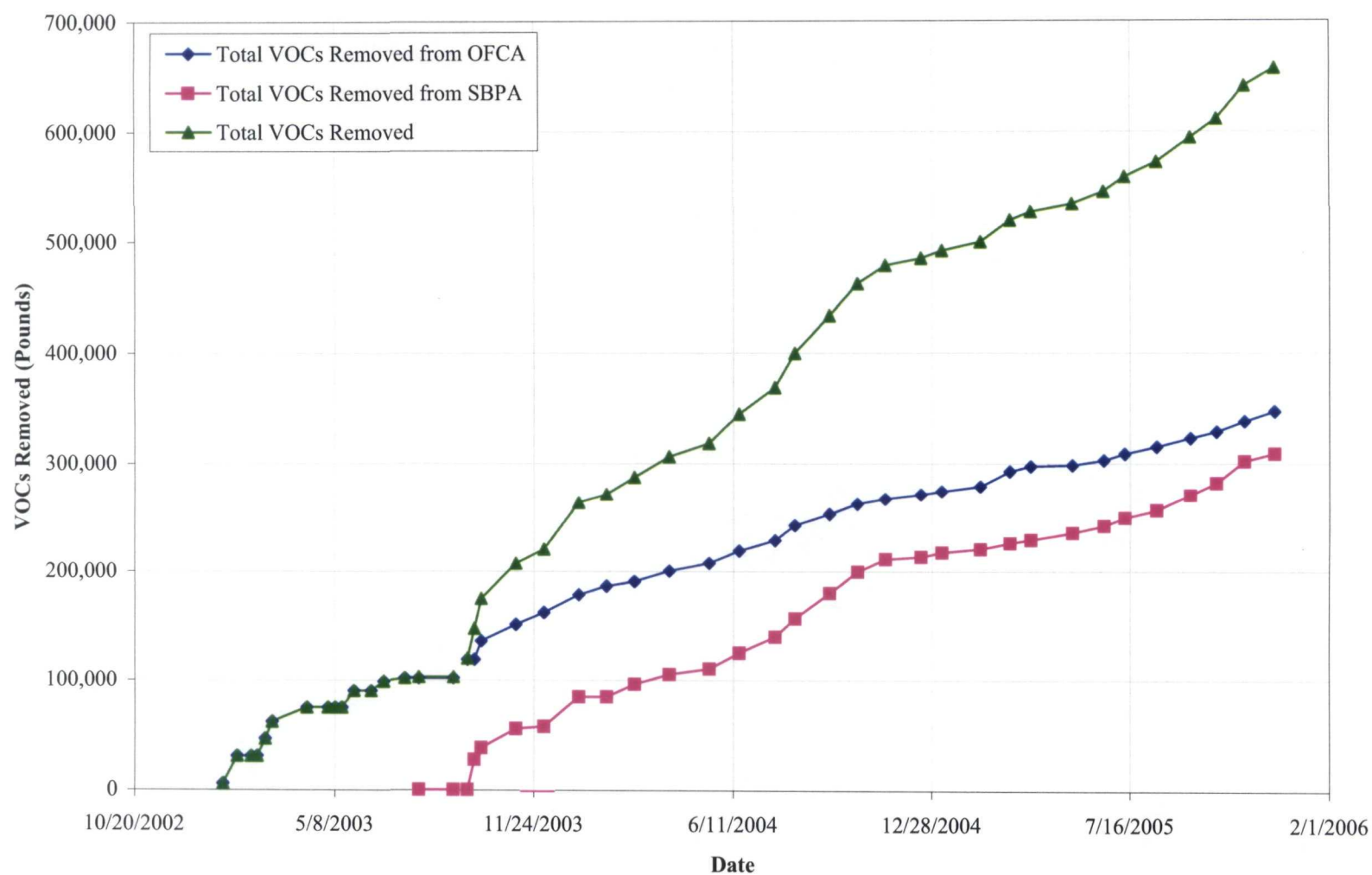
Chris

3/7/2006

VOC Removal Rate
American Chemical Services NPL Site, Griffith, IN



Total VOCs Removed **American Chemical Services NPL Site, Griffith, IN**



(112)

17 Feb 06

1355 Arrive Onsite - Clear
Calm - Cold 30°F

Personnel Onsite

Lee Orszag MWI
Mike Donnelly Microbac
Tim Kirkland Austgen
Larry Campbell BSA

1410

Disc w/ Lee Orszag.

Lee & Tim had been out on
SBPA installing DPE pump in
well #1 in order to pump product
thru system to GWTPI. Did not
pump product from weeps this week
as planned

Plant running well.

ISUE system running well
including both thorum units

Still getting bids for new
air compressor and GAC tanks

MWIOC & SG have variable
speed Grundfos pumps suspended
on galvanized pipe

1440 Left site for day

Larry Campbell

(113)